

# AGC

AL HAYTHAM GENERAL CONTRACTING  
الهيثم للمقاولات العامة



## AL HAYTHAM

MINERAL EXPLORATION  
AND GEOTECHNICAL SERVICES

رؤية VISION



المملكة العربية السعودية  
KINGDOM OF SAUDI ARABIA

# Geotechnical Investigation



AGC provides the entire spectrum of geotechnical engineering capability, from desk study through ground investigation design and supervision, factual reporting, geotechnical interpretation, foundation and stability analysis and design.

For a new site, we undertake a geological and structural review followed by a target drilling program to characterize the site's geotechnical conditions. These programs include both geotechnical, structural and hydrogeological data collection activities.

For existing operations we supply the drilling program by mapping the existing excavations and back-analyzing the geotechnical parameters of existing excavations.

At AGC, our geotechnical drilling services provide you with representative samples, supplying the accurate subsurface profile so you can make the appropriate design and engineering decisions.



**Phases start from scoping level studies, through pre-feasibility study to feasibility studies, including the following areas of study:**

- Underground Infrastructure design (tunnels, subways and underground facilities that are used in subways, underground highways, waterways and waste storage)
- Foundations design (bridges, towers, buildings, roads, highways, railroads and other structures)
- Pile foundation design; full scale static and dynamic load testing
- Geotechnical/geological hazard and terrain analysis
- Open pit and quarry design
- Soil, rock and waste dump slope stability
- Plant site and foundations investigations
- Landslide and slope stability studies
- Engineering for dams
- Engineering for soft ground

# Geotechnical Investigation

## Our In-situ tests include:

- Standard penetration test (SPT)
- Vane shear test (VST)
- Borehole shear test (BST)
- Dynamic cone penetrometer (DCP)
- Pressuremeter test (PMT)
- Dilatometer test (DMT)
- Cone Penetration Test (CPT)
- Pocket penetrometer test (PP)
- Water pressure (Packer) test (WPT)
- Plate loading test (PLT)
- Undisturbed sampling (Shelby tube)
- Cavity probing (Cross-hole seismic test)
- Geophysical borehole logging

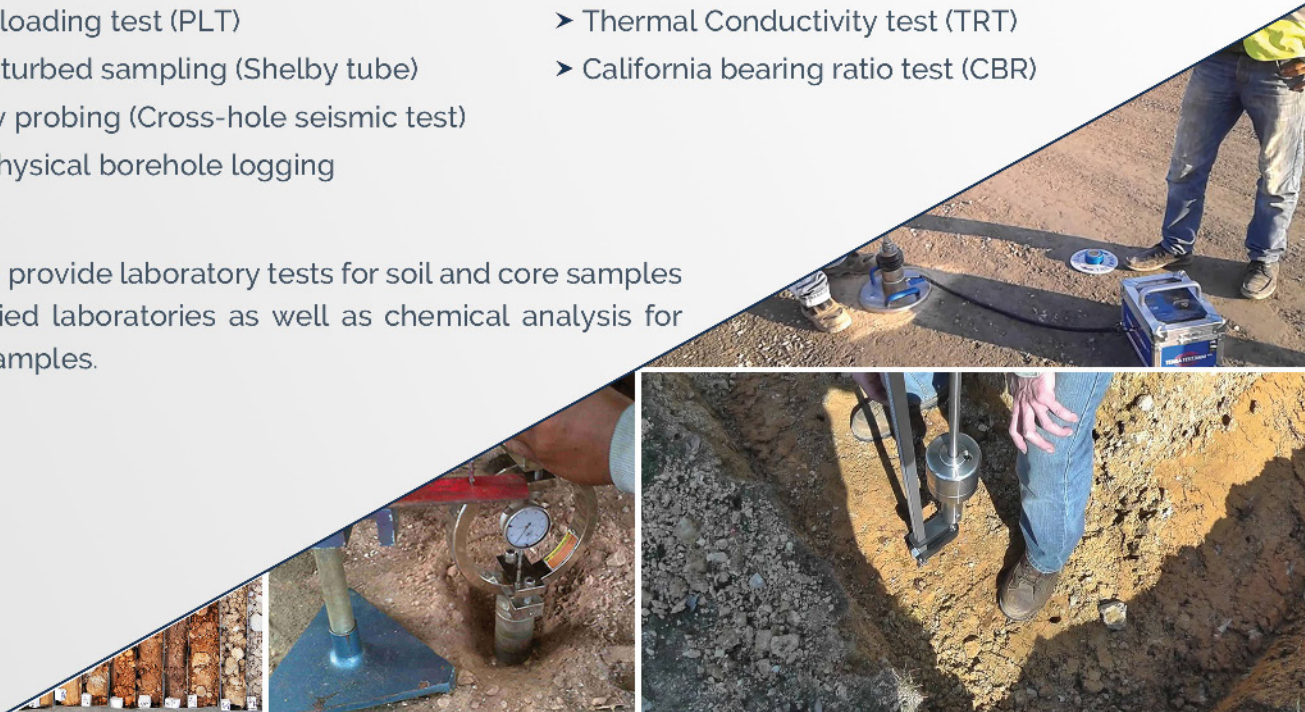
We also provide laboratory tests for soil and core samples in certified laboratories as well as chemical analysis for water samples.

## Our geotechnical drilling services include:

- Hollow stem auger
- Cable percussion drilling
- Air Rotary drilling
- Conventional core drilling
- Diamond drilling (BQ, NQ, HQ & PQ coring and Triple tube coring)

## Field tests include:

- Electric Resistivity test (ERT)
- Thermal Conductivity test (TRT)
- California bearing ratio test (CBR)





## Diamond Core Drilling

We use highly mobile surface core drill rigs configured as truck and track mounted. We offer a complete suite of surface diamond drilling services and using the most productive, technologically advanced equipment available in the industry globally. Our diamond drilling fleet enables all standard core sizes to a depth of 2,450 metres.

| Core Barrel Diameter (mm) | Maximum Depth (m) |
|---------------------------|-------------------|
| 131                       | 50                |
| 116                       | 80                |
| 101                       | 100               |
| 86                        | 120               |
| 76                        | 150               |

## Conventional Core Drilling

We are capable of drilling in soft and hard rocks using conventional technique for shallow depth drillholes with inclination angles ranging from the vertical (-90) to (-45) degrees. This technique is ideal for shallow drillholes in sedimentary deposits as it saves time and cost

## Air Core Drilling

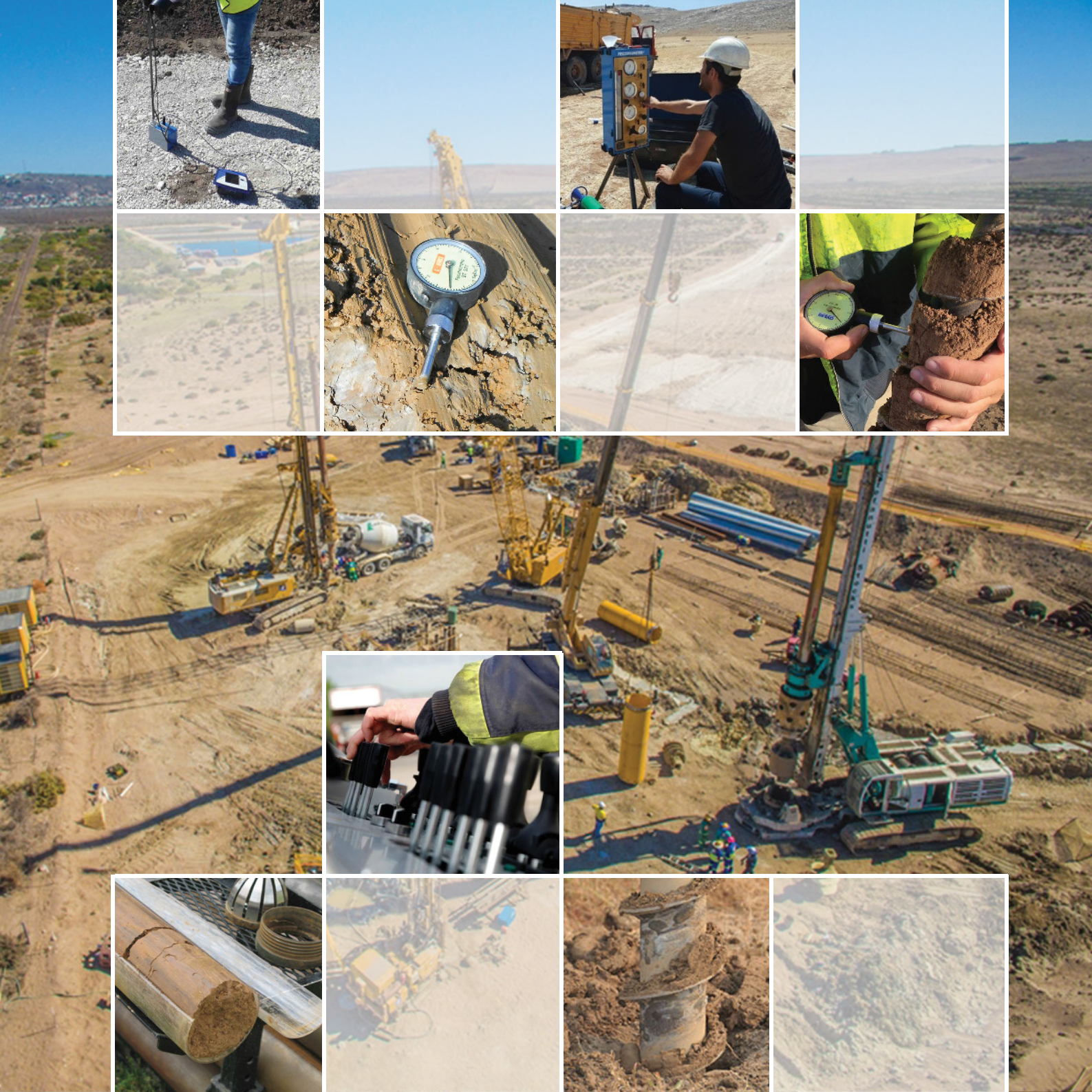
We are capable of drilling to depths up to 200m in vertical (-90) drillholes, and can reach to up to 150m in (-45) degrees inclined drillholes. Diameters range between 140mm and 152mm.

## Air and Mud Rotary Drilling

We are capable of drilling using tri cones (rotary system) with a maximum diameter of 6 inches, maximum depth that can be reached is 150 meters. This technique is ideal for shallow drillholes in sedimentary deposits as it saves time and cost.

## Geotechnical Drilling (HQ3/NQ3)

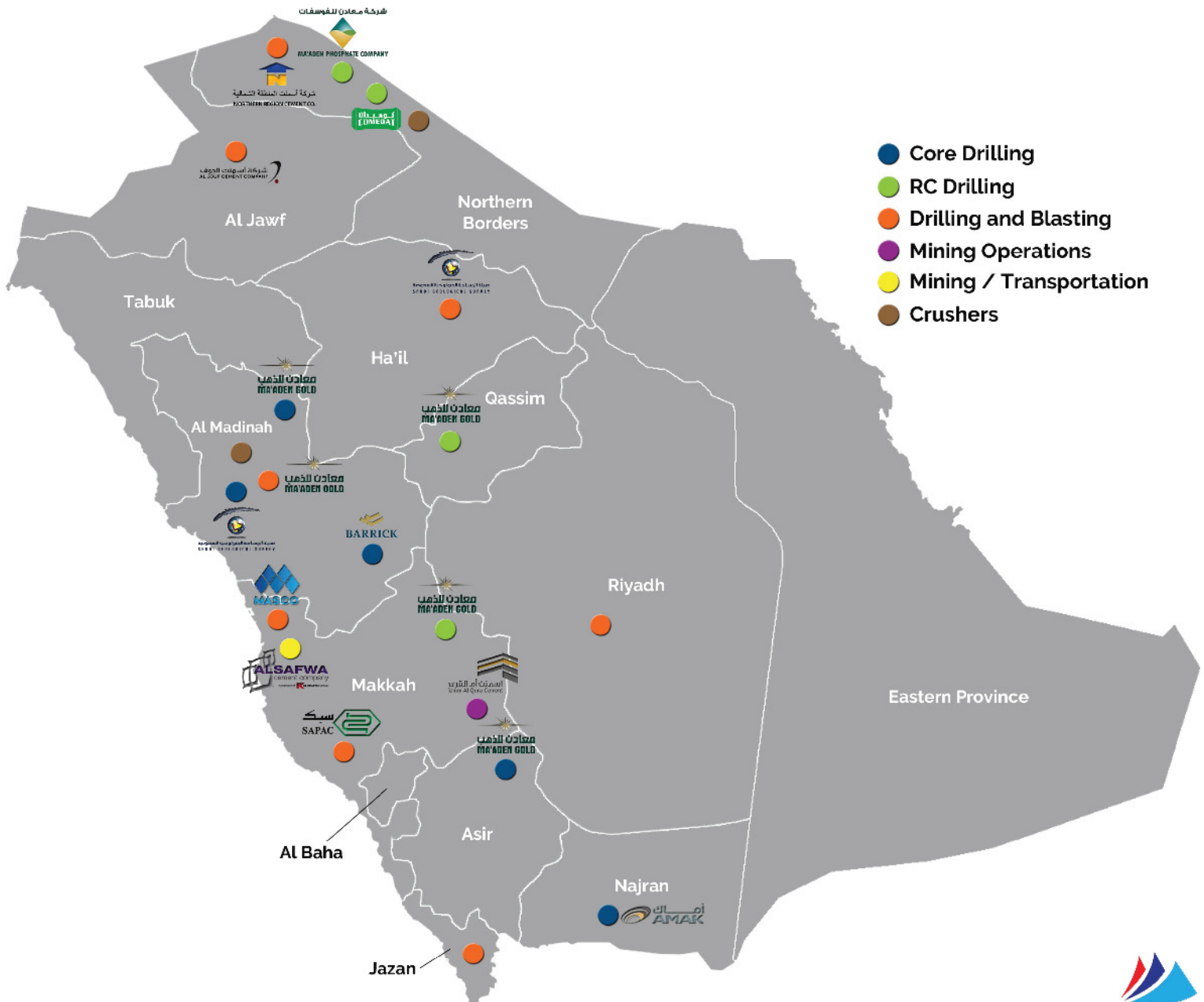
Geotechnical drilling programs can be offered in both NQ3 and HQ3 sizes using our Diamond/Wireline Core Drilling Rigs. Samples are recovered from the bottom of the hole using a split barrel sleeve that keeps the core intact.



# Our Partners



# Our Services Coverage in KSA







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